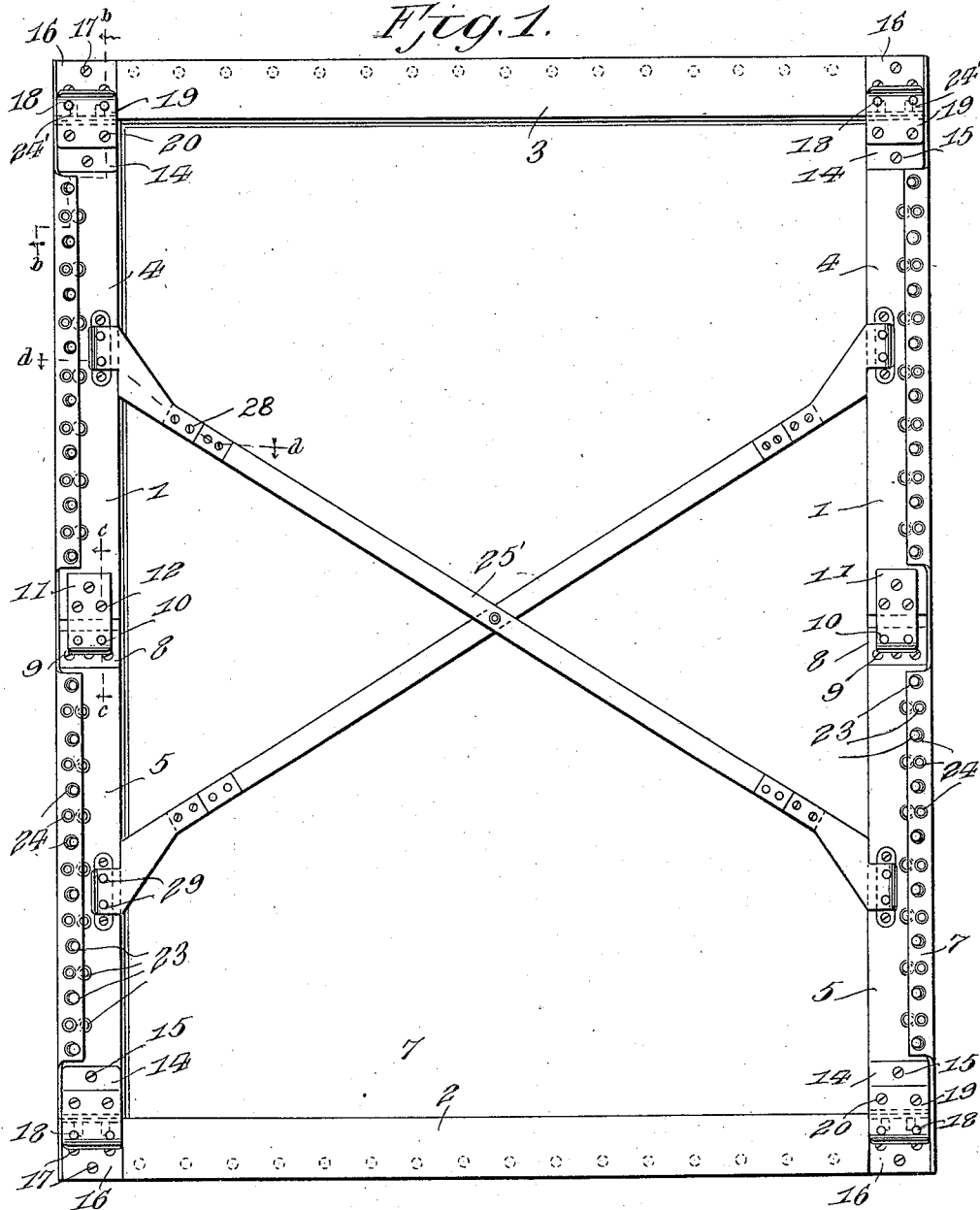


G. KUNKEL & G. H. WILLIAMS.
 KNOCKDOWN OR FOLDING SCENERY.
 APPLICATION FILED APR. 27, 1912.

1,062,479.

Patented May 20, 1913.

2 SHEETS-SHEET 1.



Witnesses

Frank Hough
J. W. Garner

Inventors
George H. Williams,
George Kunkel,
 By *Victor J. Evans*

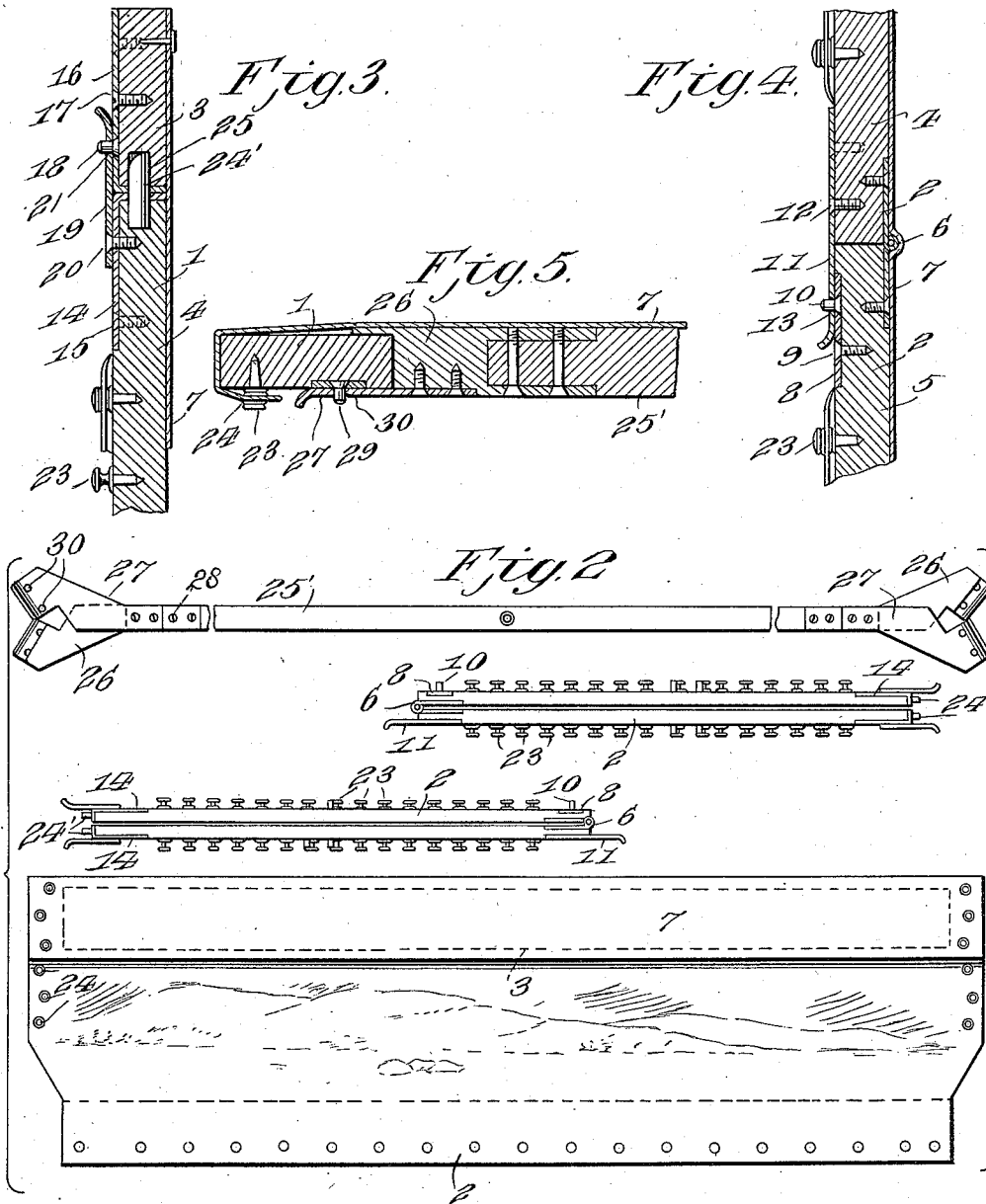
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UNITED STATES PATENT OFFICE.

GEORGE KUNKEL AND GEORGE H. WILLIAMS, OF CINCINNATI, OHIO.

KNOCKDOWN OR FOLDING SCENERY.

1,062,479.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed April 27, 1912. Serial No. 693,538.

To all whom it may concern:

Be it known that we, GEORGE KUNKEL and GEORGE H. WILLIAMS, citizens of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Knockdown or Folding Scenery, of which the following is a specification.

Our invention relates to improvements in knock-down or folding scenery and especially with reference to the construction of the frame on which the canvas is secured, the object of our invention being to effect improvements in the construction of the side stiles whereby they are adapted to be folded and also to provide improved devices for securing the foldable members of the side stiles together and also for securing the top and bottom rails to the side stiles, and, further, to effect improvements in the construction of the braces and in the means for detachably securing the ends of the braces to the side stiles.

In the drawings:—Figure 1 is an elevation of a scenery frame constructed in accordance with our invention, showing the same set up. Fig. 2 is an elevation of the same with the parts detached. Fig. 3 is a detail sectional view on the plane indicated by the line *b-b* of Fig. 1, showing a portion of one of the side stiles, a portion of the top rail and also showing our improved devices for connecting said rail to said stile. Fig. 4 is a similar view on the plane indicated by the line *c-c* of Fig. 1, showing the meeting, hinged ends of the members of one of the side stiles and our improved devices for securing said members in set up position. Fig. 5 is a detail sectional view on the plane indicated by the line *d-d*, showing a portion of one of the side stiles, a portion of one of the braces and our improved devices for detachably securing the brace to the side stile.

In the drawing the side stiles are indicated at 1, the bottom rail at 2 and the top rail at 3. In accordance with our invention, each of the side stiles is foldable and comprises a pair of members 4-5 which are connected together by a hinge 6 which is arranged one one side thereof at their meeting ends. The hinge connections between the members of the side stiles enable the

latter to be folded. The hinges are on the front faces of the stiles or those faces which are covered by the canvas 7 on which the scenery is painted. Each member 5 is provided on its rear side near its upper end with a metal plate 8 which is recessed therein and flush therewith, the said plate being secured in place as by means of screws 9 and being provided near its upper side, which is spaced a slight distance from the upper end of said stile member with outwardly projecting studs 10. A locking plate 11, which is made of suitable spring sheet metal, such as brass or the like, is secured by means of screws 12 or other suitable devices on the rear side of the stile member 4 at the lower end thereof, and projects downwardly from said stile member so as to overlap and bear on the rear side of the upper portion of the lower stile member 5 when the stile is in set up position, the said projecting lower portion of the locking plate being provided with openings 13 into which the studs 10 snap when the frame is in set up position. It will be understood that since the plates 8-11 are on the opposite side of the members of each stile from the hinges 6 and that since the said plates are provided with coengaging locking studs and openings, the said plates coact with the hinge to securely lock the members of the said stiles together and stiffen the same when the frame is in set up position and hold the frame firmly when in such position.

Each member of each side stile is provided at its outer end with a metallic plate 14 which partially covers its rear side and also covers its extreme end, the said plates being substantially L-shaped cross sectionally as shown in Fig. 3. These plates are secured by screws 15. The top and bottom rails are provided at their ends with correspondingly shaped plates 16 which are secured thereto by screws 17, the said plates covering the rear sides of the ends of the top and bottom rails and also covering those portions of their inner edges which are opposed to the ends of the side stiles. Each plate 16 is provided with outwardly extending studs 18. On each plate 14 is secured a locking plate 19, by means of screws 20. The said locking plates project beyond the ends of the side stiles so as to partially

overlap the plate 16 of the top and bottom rails and are provided in their overlapping portions with openings 21 into which the said studs 18 snap. The canvas which is arranged on the front side of the frame as shown, serves when attached to the side stiles to form flexible connections between the top and bottom rails and the corresponding ends of the side stiles, as will be understood, and when the top and bottom rails are arranged in line with the side stiles, in set up position, as shown in Figs. 1 and 3, they are secured together in such relation by the coacting locking plates 19 and plates 16, as will be understood. The locking plates 11—19 may be disconnected from the studs 10 and 18 by prying or forcing their free ends outwardly by means of any suitable implement, the free ends of the locking plates being preferably and, as here shown, slightly outturned so as to facilitate their disengagement from the locking studs.

The side stiles are provided on their rear sides with canvas securing studs 23 which are arranged at suitable distances apart and the canvas is provided near its edges with two or more series of eyelets 24 for engagement by the said studs, so that the ends of the canvas which are extended around to the rear sides of the side stiles may be thus detachably and adjustably secured thereto. The upper and lower edges of the scenery are glued, pasted or otherwise secured to the front sides of the top and bottom rails.

To further strengthen the connection between the said stiles and the top and bottom rails, the side stiles are provided at their ends with tenons 24 which are rounded on their rear sides and the top and bottom rails are provided near opposing edges with mortises 25 to receive the said tenons, the rounded faces of the tenons adapting the top and bottom rails for the pivotal movement made necessary by the hinge connections between said top and bottom rails and the side stiles effected by the canvas as hereinafter described.

Since the upper and lower sides of the canvas are permanently glued or otherwise fastened to the top and bottom rails and the sides or ends of the canvas are detachably connected to the side stiles by studs and eyelets hereinbefore described, it will be understood that when the frame is knocked down or folded and the top and bottom rails detached from the side stiles, together with the canvas, the canvas may be rolled around the top and bottom rails to avoid cracking and creasing of the paint or painted scenes on the canvas.

The braces or toggle rails of our improved knock down or folding scenery are shown at 25 and are arranged between the opposing sides of the side stiles when the scenery is set up. Each of the braces is provided at

each end with a pair of metal plates 26—27 secured thereto by screws 28 on the front and rear sides thereof, the said plates projecting from the braces or toggle rails so as to extend partly across the said stiles 1 and bear on the front and rear sides of said side stiles, the latter being provided on their rear sides with studs 29 which are adapted to snap into openings 30 in the plates 27. Hence, the said braces or toggle rails are detachably secured to the side stiles and may be readily removed therefrom when the scenery is to be knocked down and folded.

While we have herein shown and described a preferred form of our invention, we would have it understood that changes may be made in the form, proportion and construction of the several parts without departing from the spirit of our invention and within the scope of the appended claims.

We claim:—

1. A foldable or knock down scenery comprising a canvas, top and bottom rails secured to the corresponding upper and lower sides of the canvas, side stiles, the said side stiles and the corresponding portions of the canvas being provided with means to detachably secure the sides or ends of the canvas to the said side stiles, and means to detachably secure the top and bottom rails to the side stiles, the said side stiles being foldable and being provided with means to secure and stiffen them when in set up position.

2. In knock down scenery, in combination with side stiles, and top and bottom rails detachably secured to the side stiles, canvas permanently secured to the top and bottom rails, and detachably secured to the side stiles.

3. In combination, in a knock down scenery frame, with a side stile and a rail, canvas permanently secured to the rail and also detachably secured to the side stile and forming a flexible connection on one side of and between the side stile and rail, coacting means on the opposite side of the side stile and rail to secure them together when in set up position, the said securing means comprising studs projecting from one of said members, and a spring plate secured to and projecting from the other member and having openings for engagement by said studs.

4. In combination with the side stiles of scenery frames, braces arranged between the side stiles and provided at their ends with pairs of plates projecting therefrom and bearing on the front and rear sides of the side stiles, each side stile having studs and certain of the plates of said braces having openings for engagement by the said studs.

5. In knock down scenery, the combination of side stiles having dowels at their ends, top and bottom rails on the ends of the side stiles and having mortises engaged by

the dowels, canvas on one side of and secured
to the said side stiles and top and bottom
rails, and fastening means to detachably se-
cure the top and bottom rails to the side
5 stiles, said fastening means being on the op-
posite side of said rails and stiles from said
canvas.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

GEORGE KUNKEL.

GEORGE H. WILLIAMS.

Witnesses:

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PETER ALBIETZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
